



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/656,857  
Applicant: V.S. Meenakshi Sundaram, et al.

Filed: September 6, 2003

TC/ A.U.: Unknown

Examiner: Unknown

Title: METHODS FOR MODIFYING WLWCTRICAL PROPERTIES OF  
PAPERMAKING COMPOSITIONS USING CARBON DIOXIDE

Attorney Docket: Serie 6052

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited on the enclosed PTO Form 1449 is enclosed.

No fee is due at this time in accordance with 37 C.F.R. § 1.97. However, the Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 01-1375. This paper is submitted in duplicate. To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

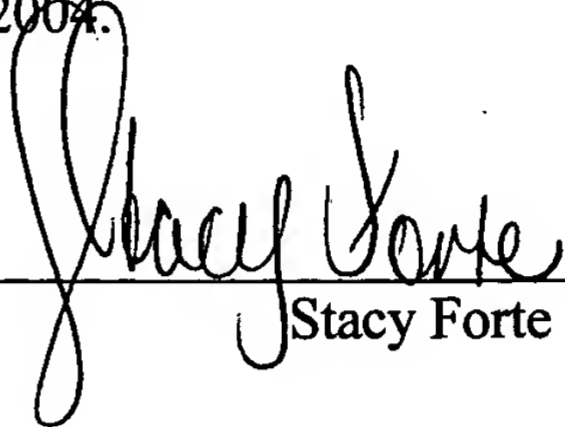
Elwood L. Haynes  
Registration No. 55,254

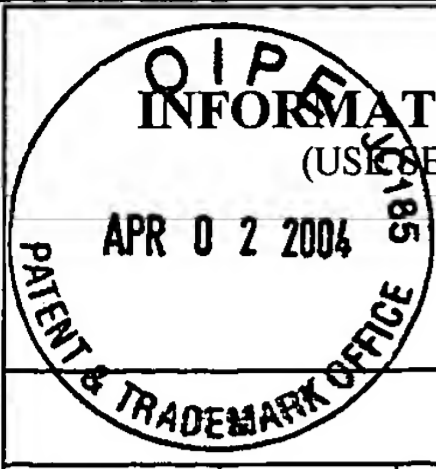
Date: March 31, 2004  
Air Liquide- Intellectual Property Department  
2700 Post Oak Boulevard, Suite 1800  
Houston, Texas 77056  
(713) 624-8956 Phone – (713) 624-8950 Fax



CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450, on this 31<sup>st</sup> day of March, 2004.

  
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Stacy Forte

 <b>INFORMATION DISCLOSURE CITATION</b> (USE SEVERAL SHEETS IF NECESSARY)				ATTY. DOCKET NO. <b>Serie 6052</b>		SERIAL NO. <b>10/656,857</b>	
				APPLICANT(S) <b>V.S. Meenakshi Sundaram, et al.</b>			
				FILING DATE <b>September 6, 2003</b>		GROUP <b>Unknown</b>	
<b>U.S. PATENT DOCUMENTS</b>							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A1	5,505,819	4-9-96	De Witt, et al.			
	A2	5,156,719	10-20-92	Passaretti			
	A3	5,043,017	8-27-91	Passaretti			
	A6	6,228,161 B1	5-8-01	Drummond			
	A5	6,540,878 B1	4-1-03	Leino			
	A6	5,378,322	1-3-95	Hornsey			
	A7	6,540,870 B1	4-1-03	Laurila-Lumme, et al.			
	A8	6,589,387 B1	7-8-03	Leino, et al.			
	A9	6,537,425 B2	3-25-03	Rheims, et al.			
	A10	6,436,232 B1	8-20-02	Silenius, et al.			
	A11	6,599,390 B2	7-29-03	Rheims, et al.			
	A12	6,251,356 B1	6-26-01	Mathur			
	A13	5,365,775	11-2-94	Penniman			
	A14	6,072,309	6-6-00	Watson, et al.			
	A15	4,535,285	8-13-85	Evans, et al.			
	A16	0148581 A1	10-17-02	De Rigaud, et al.			
	A17	0059999 A1	5-23-02	Hua, et al.			
	A18	0134519 A1	9-26-02	Karlsson, et al.			
	A19	0162638 A1	11-7-02	Doelle			

FOREIGN PATENT DOCUMENTS								
Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	B1	WO 99/35333	7-15-99	PCT				
	B2	WO 03/050356	6-19-03	PCT				
	B3	WO 99/24661	5-20-99	PCT				
	B4	EP 0991811 B1	6-12-98	Europe				
	B5	EP 0296198 B1	12-21-87	Europe				
	B6	WO 01/75221	4-4-01	PCT				
	B7	WO 99/45202	3-1-99	PCT				
	B8	WO 01/04415	7-5-00	PCT				
	B9	WO 02/097189	5-30-02	PCT				
	B10	WO 00/73576	5-18-00	PCT				
	B11	WO 98/12551	3-26-98	PCT				
	B12	EP 0079726	11-4-82	Europe				
	B13	WO 99/54741	4-12-99	PCT				
	B14	WO 99/24661	11-3-98	PCT				
	B15	WO 98/56988	6-12-98	PCT				
	B16	WO 00/47817	1-26-00	PCT				
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
Examiner Initial		Date	Document			Translation		
	C1	12-18-03	International Search Report					
	C2	Copyright 2000	The American Heritage Dictionary of the English Language; Fourth Edition; Houghton Mifflin Co.					
	C3	Copyright 1992	Chemical Processing Aids in Papermaking; A Practical Guide; Kevin J. Hipolit, Editor; Philip M. Hoekstra, Chairman					

	C4	Copyright 1996	Principles of Wet End Chemistry; William E. Scott, Ph. D.; Copyright 1996		
	C5	Copyright 1992	Wet End Chemistry, An Introduction; William E. Scott, Ph.D.; Second Printing 1992		
	C6	Unknown	Ionic Equilibrium, Solubility and pH Calculations; James N. Butler and David R. Cogley;		
	C7	Copyright 1979	The Effect of Cations on Pulp and Paper Properties; A.M. Scallan and J. Grignon		
	C8	IMPS 2002-Presentation	Neutralization with CO2 Feasibility in Photo Paper; Besser, Kleeman, Leigraf		
	C9	4-26-95	00514700 PaperChem No.: AB6517018; Interactions Between Cationic Starches and Papermaking Fibers; Effect of Starch Characteristics on Fiber Surface Charge and Starch Retention; B. Gupta and W. Scott		
	C10	Copyright 1992	00350859 PaperChem No.: AB6500859; Wet-End Chemistry of Retention, Drainage and Formation Acids; J.E. Unbehend		
	C11	September 1989	00284306 PaperChem No. AB6107175; Use of Potentiometric Titration and Polyelectrolyte Titration to Measure the Surface Charge of Cellulose Fiber; R.I.S. Gill; Vol. 1: 437-452; Conference Literature		
	C12	June 1984	00207496 PaperChem No.: AB5508465; Adsorption of Ions at the Cellulose/Aqueous Electrolyte Interface; T.M. Herrington and B.R. Midmore; JCS Faraday I 80, No. 6: 1525-1566		
	C13	Copyright 1978	00146149 PaperChem No.: AB5008078; Surface Phenomena; J. d'A Clark; Pulp Technol. & Trmt. for Paper, Chap. 4: 87-105		
	C14	5-15-89	00141038 PaperChem No.: AB5002967; Interfacial Properties of Polyelectrolyte-Cellulose Systems; F. Onabe; J. Appl. Polymer Sci. 23, No. 10: 2909-2922; cf. ABIPC 49:		
	C15	November 1978	00137406 PaperChem No. AB4909775; Comparative Evaluation of Electrokinetic Behavior of Polyelectrolyte-Cellulose Systems; F. Onabe		
	C16	July 1977	00120629 PaperChem No.: AB4804688; Adsorption and Flocculation Mechanisms in Paper Stock Systems; K.W. Britt, A.G. Dillon and L.A. Evans		
	C17	December 1975	00101645 PaperChem No.: AB4610134; Zeta-Potential Measurements in Paper Manufacture; T. Lindstrom and C. Soremark; Papier 29 no. 12: 519-525		

	C18	January 1975	00089534 PaperChem No.: AB4510693; Drainage and Retention Mechanisms of Papermaking Systems Treated with Cationic Polymers; Tappi 58, no.1: 99-101		
	C19	June 1974	00084680 PaperChem No.: AB4505839; Importance of Electrokinetic Properties of Wood Fiber for Papermaking; T. Lindstrom, C. Soremark, C. Heinegard and S. Martin-Lof; TAPPI Papermakers Conf. (Boston): 77-84		
	C20	July 1969	00024862 PaperChem No.: AB4004810; Influence of a Alum and pH on the Zeta Potential of Fibers and Additives; A.W. McKenzie, V. Balodis and A. Milgrom; Appita 23, no.1: 40-4		
	C21	March 1967	00003679 PaperChem No.: AB3803679; Retention and Retention Aids; C.J.J. Ninck Blok and B. de Klein; Papierwereld 22, no. 3: 69-81, Dutch; Engl. sum.		
	C22	October 1997	00589937 PaperChem No.: AB6806087; Online Cationic-Demand Measurement for Wet-End Papermaking; C. Veal (Chemtrac Systems); Conference: 1997 Engineering and Papermakers: Forming Bonds for Better Papermaking		
	C23	1-15-96	00545901 PaperChem No.: AB6700058; Starches for Surface Sizing and Wet-End Addition; P.H. Brouwer; Wochenbl. Papierfabr. 124, no. 1: 19-26		
EXAMINER:			DATE CONSIDERED:		
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					